

Energy Modeling | Cost Analysis | HVAC Design

A comprehensive energy plan for your home or building

Energy Modeling

ZED analyzes architectural plans, homes, or buildings, then presents recommendations to achieve lower energy costs and a reduced carbon footprint. We are committed to a minimum energy reduction for our clients of 50% better than required by building code. Using energy modeling software we address energy conservation, efficient consumption, and energy production.



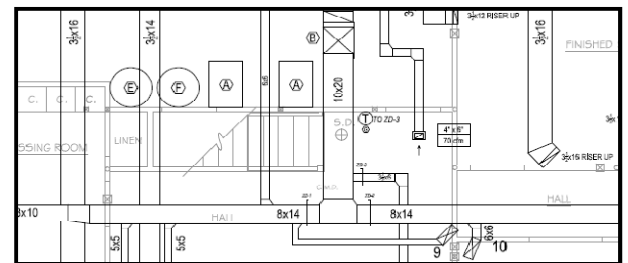
Cost Analysis

ZED recommendations are based on real data, including energy prices, costs from your contractor, available financial incentives, inflation rates, your borrowing costs, maintenance costs, and the equipment lifespan. Financial analysis of this data clarifies where your money is best invested for improved energy performance.

Improvement Name	Cost
Window Baseline	\$ 30,470
Serious Windows - 725 Series	\$ 33,866
Window 1	\$ 31,470
Window 2	\$ 6,000
Window 3	\$ 6,000
Window 4	\$ 6,000
Insulation Baseline	\$ 6,000
Stamp OC	\$ 6,000
Stamp OC + rigid interior	\$ 6,000
Stamp OC + rigid interior	\$ 6,000

HVAC Design

ZED provides calculations for heating, cooling, and ventilation systems, specifies and sizes the equipment, and then develops construction drawings for the distribution system (ducts & hydronic). Proper sizing and design result in a right-sized system, lower equipment costs, an energy performance increase, and lower utility bills.



We answer the challenging questions:

- Which energy improvements make sense for my situation?
- What is the real payback of each improvement?
- Does renewable energy make financial sense given the other improvements I plan to make?
- What is the best heating and cooling system for my situation and preferences?
- What is the 'right size' for my system so it will be most efficient?
- Will the rooms all be the same comfortable temperature?
- What are my options for healthy indoor air quality?

As an objective third party, we have no financial affiliation to manufacturers or product vendors.

We offer clear benefits:

Financial Justification & Clear Decision Making

How do you decide which are the most cost effective energy improvements? What is the best use of your funds?

Our recommendations focus on objective metrics (rather than a gut reaction to a payback period) so you can make a smart, data based decision. Cost effectiveness can be measured according to cost of ownership, net present value (NPV), internal rate of return (IRR), return on investment (ROI), and other client-selected metrics.

Good Design Equals Better Comfort

Would you like to avoid cold spots, hot spots, and stuffy rooms?

Our full design and distribution of heating, cooling, and fresh air yields a more comfortable indoor environment, with even and consistent temperatures.

Third Party Recommendations

Are you wondering if a vendor really has your best interests in mind? Whether a particular system is the best option for you?

As an objective third party, you can rest assured that systems we recommend will meet Client objectives. We have no conflicts of interest since we neither sell products or systems nor have financial interest in the implementation of our recommendations. Our goal is a satisfied Client and a home or building that achieves the Client's objectives. We can also relieve you of the burden of signing off on an HVAC installation by sending our engineer to conduct HVAC quality assurance inspections during construction.

Whole Building System Design including Renewable Energy

Do you need an overall strategy for the entire building? Will systems all work together properly?

We will approach your project from a true whole building perspective and provide a comprehensive strategy for the building envelope, heating, cooling, hot water, appliances, lighting, ventilation, energy production, and more.

Full Engineering Calculations and Detailed Drawings for Guidance

Is your installer using his own 'design', no design at all, or perhaps antiquated rules of thumb?

We perform whole-building and room-by-room load calculations, specify and size equipment, then complete the distribution system sizing and layout electronically. We utilize the nationally accepted Air Conditioning Contractors of America (ACCA) Guidelines with complete calculations using Manuals J, S, D, plus hydronic calculations.

Right Sized Equipment Reduces Costs and Increases Performance

Is the system about to be installed is the right size? Is the installer incentivized to sell/install a bigger system than needed?

Improper HVAC sizing and layout can lead to humidity and mold problems, system inefficiency, and short cycling with mechanical failure and shorter system lifespan. We right-size and design the systems to avoid these problems, ensure the best performance, and reduce costs associated with installing a bigger system than is needed.

Sustainable Options

Are you looking for a solution more environmentally sensitive than traditional fossil fuel systems?

We offer alternative choices that can either reduce or eliminate fossil fuel use completely on your site. Potential targets can be to reduce or offset your carbon footprint, create a fossil fuel free site, or incorporate renewable energy systems to partially or completely off-set annual energy consumption (zero net energy).

Call to discuss your project: 617.720.5002 Ext.102